

Maryland Inventory of Historic Properties Number: CH 496  
Name: MD 225 over Br. of Mattawoman Creek

MARYLAND HISTORICAL TRUST	
Eligibility Recommended <u>  X  </u>	Eligibility Not Recommended <u>      </u>
Criteria: <u>  A  </u> <u>  B  </u> <u>  C  </u> <u>  D  </u> Considerations: <u>  A  </u> <u>  B  </u> <u>  C  </u> <u>  D  </u> <u>  E  </u> <u>  F  </u> <u>  G  </u> <u>None</u>	
Comments: _____ _____ _____	
Reviewer, OPS: <u>  Anne E. Bruder  </u>	Date: <u>  3 April 2001  </u>
Reviewer, NR Program: <u>  Peter E. Kurtze  </u>	Date: <u>  3 April 2001  </u>

MARYLAND INVENTORY OF HISTORIC BRIDGES  
HISTORIC BRIDGE INVENTORY  
MARYLAND STATE HIGHWAY ADMINISTRATION/  
MARYLAND HISTORICAL TRUST

MHT No. CH-496

SHA Bridge No. 8024

Bridge name MD 225 over Branch of Mattawoman Creek

**LOCATION:**

Street/Road name and number MD 225 (Hawthorne Road)

City/town Mason Springs Vicinity X

County Charles

This bridge projects over: Road ☐ Railway ☐ Water ☒ Land ☐

Ownership: State ☒ County ☐ Municipal ☐ Other ☐

**HISTORIC STATUS:**

Is bridge located within a designated historic district? Yes ☐ No ☒

National Register-listed district ☐ National Register-determined-eligible district ☐

Locally-designated district ☐ Other ☐

Name of district \_\_\_\_\_

**BRIDGE TYPE:**

Timber Bridge ☐ :  
Beam Bridge ☐ Truss -Covered ☐ Trestle ☐ Timber-And-Concrete ☐

Stone Arch Bridge ☐

Metal Truss Bridge ☐

Movable Bridge ☐ :  
Swing ☐ Bascule Single Leaf ☐ Bascule Multiple Leaf ☐  
Vertical Lift ☐ Retractable ☐ Pontoon ☐

Metal Girder ☐ :  
Rolled Girder ☐ Rolled Girder Concrete Encased ☐  
Plate Girder ☐ Plate Girder Concrete Encased ☐

Metal Suspension ☐

Metal Arch ☐

Metal Cantilever ☐

Concrete ☒ :  
Concrete Arch ☒ Concrete Slab ☐ Concrete Beam ☐ Rigid Frame ☐

Other ☐ Type Name \_\_\_\_\_

**DESCRIPTION:****Describe Setting:**

Bridge 8024 carries MD 225 over a branch of the Mattawoman Creek. MD 225 runs in a north-south direction and crosses a Branch of Mattawoman Creek Run that flows east-west. MD 225 connects southern Charles County with the county seat at LaPlata. The area surrounding the bridge is lightly developed with post-World War II housing. The viewshed of the bridge is woods and marshland.

**Describe Superstructure and Substructure:**

Bridge 8024 is a single span filled spandrel concrete arch bridge built in 1929. The overall length of the bridge is 57 feet with a clear span at the springline of 35 feet. There is clear roadway width of 24 feet, with an overall width of 27 feet 2 inches. The northern wingwalls are approximately 11 feet long and 10 feet high with a width of 27 feet. The top of the crown is separated from the riding surface by the bridge's earthen fill. The spandrel walls vary in width from 1 foot 10 inches at the top of the crown to 6 feet at the joint of the wingwall. The spandrel walls have a 2-inch cove molding on the intrados and a 1-inch angle strip on the extrados.

Based on field visits and a 1995 inspection report, the arch has areas of longitudinal cracking with moderate to heavy efflorescence along the construction joints at the outer edges of the intrados. In addition, there are areas of fine random cracking and light scale along the remaining portions of the intrados. The riding surface has random area of sealed longitudinal and transverse cracking.

The 1995 inspection report noted the condition of the abutments and wingwalls. The abutments have heavy erosion along the faces of the east and west abutments, with some surface spalling. The outer edges of both the east and west abutments show heavy efflorescence. There is spalling present along both the northwest and northeast wingwall. The wingwalls also have fine random cracking along the remaining surface, with heavy areas of heavy vegetation growth. The bridge is rated as being in satisfactory condition, with a sufficiency rating of 66.

The bridge has its original parapets. They are a combination of the open panel and the closed panel design. On either side of the clear span, the wingwalls have 11-foot closed paneled parapets. These parapets have a 2 foot by 8 foot incised panel as decoration. The sections of the parapets are attached to the crown of the bridge by a lock and key method. The 2-inch by 4-inch key rests in a 2 inch by 4-inch lock at the top of the crown. The clear span has 3 sets of open paneled parapets. Each section has 11 balusters to 1 paneled expansion joint. The 11 balusters within each section total 9 feet 2 inches in length. Each baluster is 2 feet 8 inches high with a 1 foot 4 inch cap extending the length of the parapet. Each open section is divided by a 2 foot 6 inch expansion joint. The open sections are separated from the closed section by 1/4-inch felt expansion joint. The five sections (closed, open, open, open, closed) total 57 feet 6 inches in length.

The spandrel walls currently have areas of gunite repairs made at an unknown date along the south spandrel wall, however, there are also areas of light efflorescence and fine cracking at these points. The northern walls have light scale with area of fine vertical cracking along the surface areas.

The parapets have areas of medium to heavy scale along both the northern and southern balusters, with random spalling along the posts. The top sections of the endblocks were repaired at an unknown date. There is some misalignment, but not enough to cause replacement concern.

**Discuss Major Alterations:**

No major alterations have occurred to this structure.

**HISTORY:**

**WHEN** was bridge built (actual date or date range) 1929

This date is: Actual ☒ Estimated ☐

Source of date: Plaque ☐ Design plans ☐ County bridge files/inspection form ☒

Other (specify) \_\_\_\_\_

**WHY was bridge built?** To replace an earlier concrete structure

**WHO was the designer?** State Roads Commission

**WHO was the builder?** State Roads Commission

**WHY was bridge altered?** N/A

**Was bridge built as part of an organized bridge-building campaign?**

No, this bridge was not built as part of an organized bridge building campaign.

#### **SURVEYOR/HISTORIAN ANALYSIS:**

**This bridge may have National Register significance for its association with:**

**A - Events** \_\_\_\_ **B- Person** \_\_\_\_

**C- Engineering/architectural character** **X** \_\_\_\_

The bridge was determined eligible by the Interagency Review Committee in February 1996.

**Was bridge constructed in response to significant events in Maryland or local history?**

Bridge 8024 was built on the LaPlata-Masons Springs Road (Hawthorne Road) at Jenkins Hill. This road connected the eastern farmers of Charles County to the county seat at LaPlata in central Charles County. In 1928 when designs began for the current structure, Hawthorne Road was a moderately improved trading route with a gravel road. The State Roads Commission redesigned the road and removed the existing single land concrete bridge. Before the new arch was built, a temporary timber bridge was built to the south of the existing concrete arch bridge. The construction engineers were instructed to remove the demolished reinforced concrete bridge and use the rubble as pavement, fill, and rip rap in the stream bed. The temporary bridge was dismantled and piled along side the new bridge to await relocation.

The new bridge was built using funds from the "Special Bridge Fund." This fund allowed the state to issue bonds for the construction of new bridges where needed. The proceeds of the bond issue were credited to the accounts of the State roads Commission, with 80% going directly to Commission-sponsored projects and 20% going to the City of Baltimore. This bridge was built to improve a connector road between the county seat and the surrounding county. This project was begun in 1908 as part of the Commission's initial "Seven-Year Plan," and continued until the 1940s.

**When the bridge was built and/or given a major alteration, did it have a significant impact on the growth & development of the area?**

The pre-existing bridge at the upstream location was a concrete bridge that was probably built during the first decade of the twentieth century to replace a timber bridge. The realignment of the road eliminated a dangerous alignment along this route, however, it did not increase the progression of development in this area. Charles County remained relatively rural and agrarian until the late-twentieth century. The building of this bridge assisted the local communities, but did not have a great impact on the economy.

**Is the bridge located in an area that may be eligible for historic designation?**

No, this bridge is not located in an area that is eligible for historic designation.

**Is the bridge a significant example of its type?**

Yes, this bridge is a significant example of a single-span concrete arch bridge built during the 1910 to 1940 key period of significance. During this period reinforced concrete structures were characterized by increasing standardization of small slab, beam, frame, and culvert spans. Special subtypes of reinforced concrete bridges, such as the Luten arch, open spandrel ribbed arch, the rigid frame bridge and concrete girders were introduced and built as grade crossing elimination structures.

The as-built plans for bridge 8024 stated the bridge should be built to State Roads Commission Specifications, dated February 5, 1929. It is important to note that the State Roads Commission during this time did not have specific plans for the every standard arch. However, the engineers did have design specifications for the concrete, the reinforcement

bars, the parapets, and the expansion joints. It was the responsibility of the engineer to determine the load and traffic conditions along with the environmental confines and design a standard arch bridge.

**Does bridge retain integrity of important elements described in Context Addendum?**

Yes this bridge retains integrity of its character defining elements. Although some repairs were made to the wingwalls, the barrel, the spandrel walls, the parapets, and the abutments, all are original and have only moderate deterioration.

**Is the bridge a significant example of the work of the manufacturer, designer, and/or engineer and why?**

Yes, this bridge is a significant example of the State Roads Commission's efforts from 1910 until 1945 to eliminate dangerous geometric alignments. The development of standardized plans helped to facilitate this process.

**Should bridge be given further study before significance analysis is made?**

No, this bridge should not be given further study.

**BIBLIOGRAPHY:**

County inspection/bridge files \_\_\_\_\_ SHA inspection/bridge files   X  

**Other (list):**

Johnson, Arthur Newhall

1899 The Present Condition of Maryland Highways. In *Report on the Highways of Maryland*. Maryland Geological Survey, The Johns Hopkins University Press, Baltimore.

P.A.C. Spero & Company and Louis Berger & Associates

1995 Historic Highway Bridges in Maryland: 1631-1960: Historic Context Report. Maryland State Highway Administration, Maryland State Department of Transportation, Baltimore, Maryland.

Tyrrell, H. Grattan

1909 *Concrete Bridges and Culverts for Both Railroads and Highways*. The Myron C. Clark Publishing Company, Chicago and New York.

**SURVEYOR:**

Date bridge recorded December 1997

Name of surveyor Wallace, Montgomery & Associates / P.A.C. Spero & Company

Organization/Address P.A.C. Spero & Co., 40 W. Chesapeake Avenue, Baltimore, MD 21204

Phone number (410) 296-1635 FAX number (410) 296-1670

## Maryland Historic Highway Bridges

Bridge Type CONCRETE ARCH

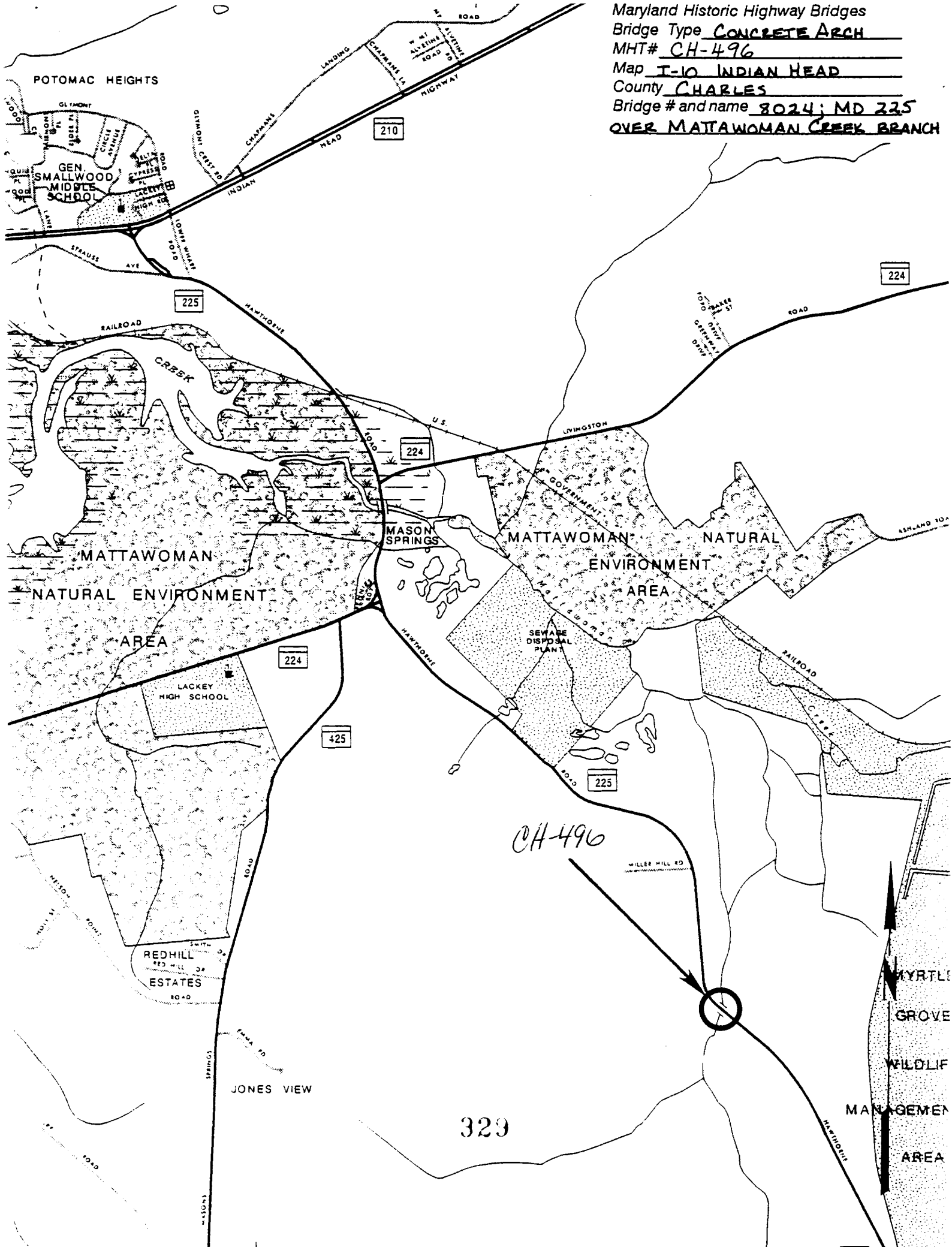
MHT# CH-496

Map I-10 INDIAN HEAD

County CHARLES

Bridge # and name 8024; MD 225

OVER MATTAWOMAN CREEK BRANCH





CH-496  
BRIDGE # 8024  
CHARLES COUNTY

D. BRAUNIK

2-2-95

MARYLAND SHPO SHA

MD 225 OVER BRANCH OF MATTAWOMAN  
CREEK

LOOKING WEST ON MD 225





CH-496

BRIDGE # 8024

CHARLES COUNTY

D. BHAUMIK

2-2-95

MARYLAND SHPD SHA

MD 225 OVER BRANCH OF MATTAWOMAN  
LOOKING SOUTH (DOWNSTREAM <sup>CREEK</sup> FACE)



3 OF 3

CH-496

BRIDGE # 8024  
CHARLES COUNTY

D. BRAUMIK

2-2-95

~~MARYLAND SHPO SHA~~

MD 225 OVER BRANCH OF MATTAWOMAN  
CREEK

LOOKING EAST ON MD 225

## Capsule Summary Sheet

**Survey Number:** CH-496

**Construction Date:** 1929

**Name:** SHA Bridge No. 8024

Modified: 1999

**Location:** MD 225 (Hawthorne Road), Charles County, Maryland

**Description:** SHA Bridge No. 8024, MD 225 over Mattawoman Creek, Charles County, is a single-span, filled spandrel, concrete arch bridge with three open and two closed panel parapets. The parapets are attached to the crown of the bridge by a lock and key method. The overall length of the bridge is 57 feet with a clear span at the springline of 35 feet. The bridge was widened to two 12-foot lanes with eight-foot shoulders in 1999 in order to matching the existing MD 225 roadway on either side of the structure. Three, three-foot wide pre-stressed, pre-cast concrete planks were added to each side of the existing concrete arch. The parapets were removed and replaced with jersey barrier-shaped concrete parapets. The outside faces of these parapets were patterned to imitate the type of closed face parapets used throughout the 1920's. They have a rectangular pattern applied to the outside face. Abutments were extended and wingwalls added to the existing structure.

**Significance:** Bridge No. 8024 was built on the LaPlata-Masons Spring Road (Hawthorne Road) which connected the eastern farmers of Charles County to the county seat at LaPlata. In 1928, when the existing bridge was under consideration, Hawthorne Road was a moderately improved trading route with a gravel surface. The State Roads Commission re-designed the road and removed the existing single-lane concrete bridge prior to the construction of the existing structure.

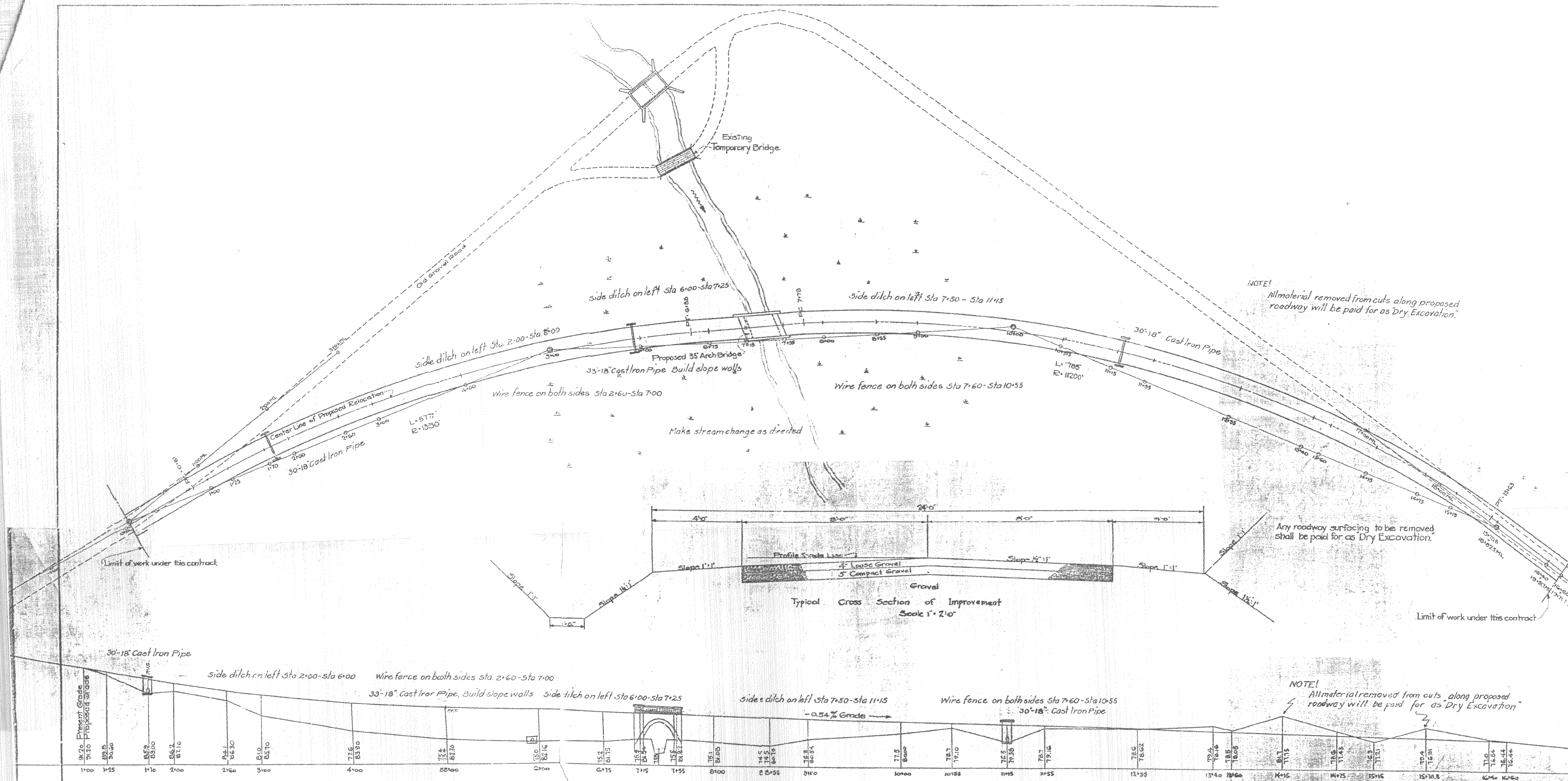
Concrete arch bridges are generally considered to be individually eligible for the National Register under Criterion C as they demonstrate the capability of reinforced concrete for bridge construction, if they retain the appropriate level of integrity in the character-defining elements. This bridge was a good excellent example of the arched version of the standard plan for concrete used in a rural setting the State Roads Commission in 1928 and 1929. As a result of the changes undertaken in 1999 the structure no longer retains the requisite integrity to qualify for inclusion in the National Register.

Prepared by:  
Ms. Rita M. Suffness  
Cultural Resources Manager  
MD SHA  
2/28/2000



6  
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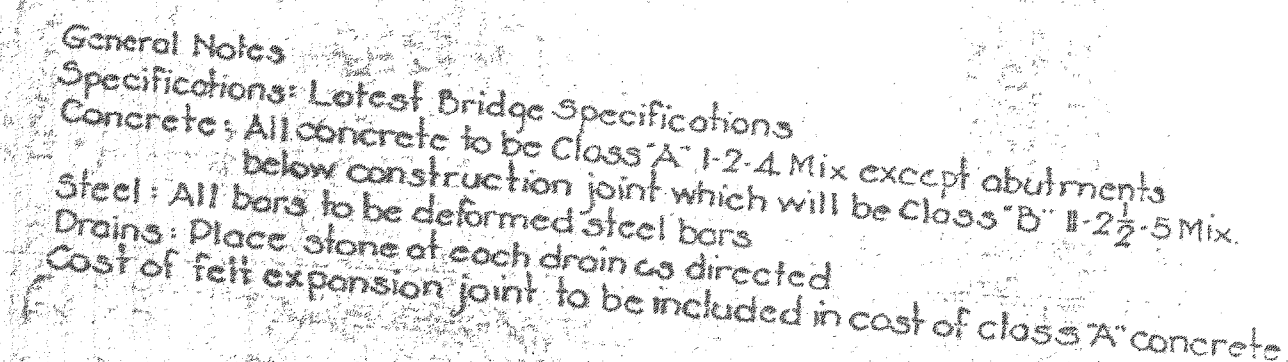
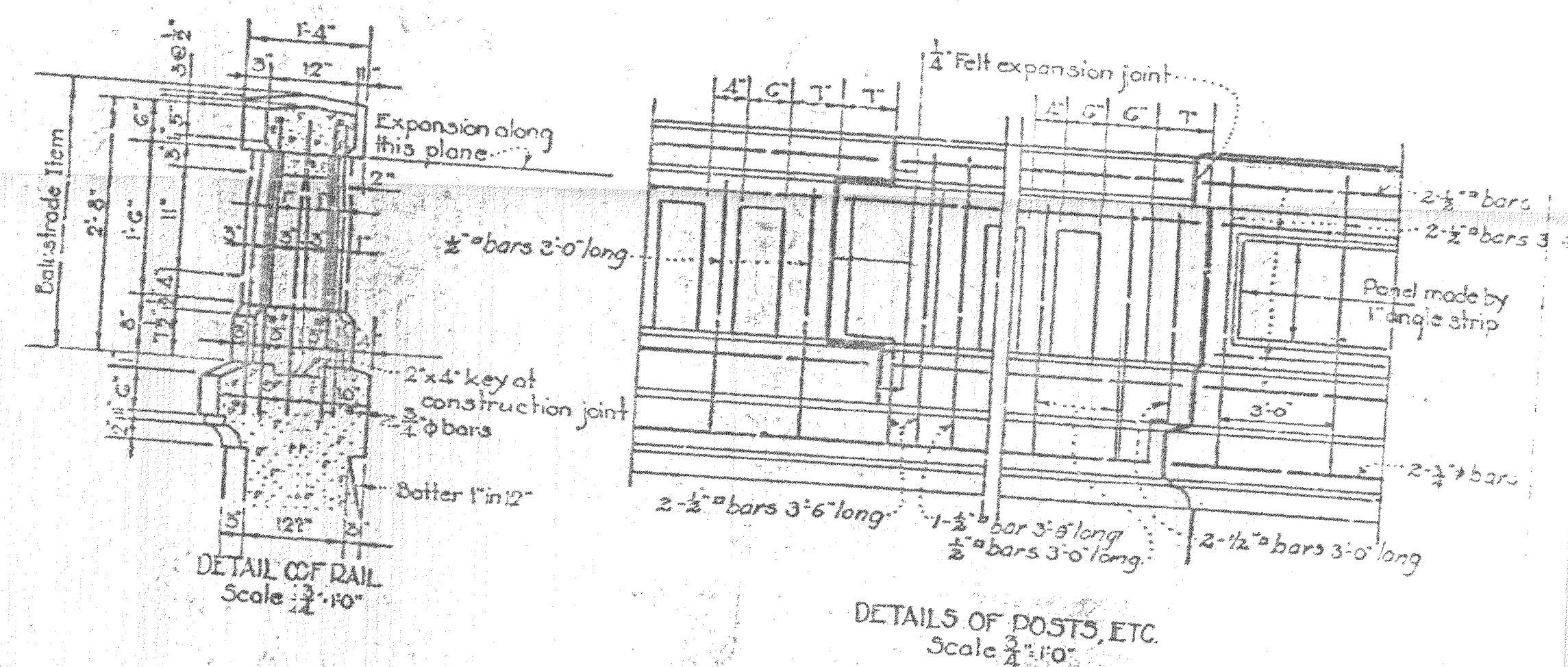
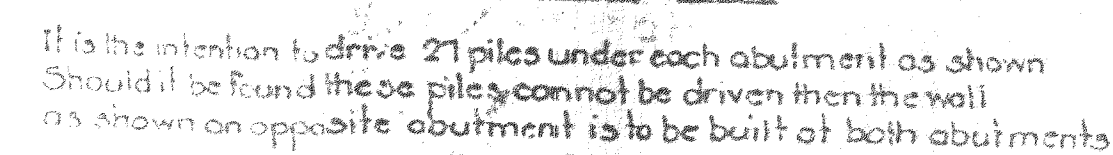
Maryland State Archives



STATE OF MARYLAND STATE ROADS COMMISSION BALTIMORE MD.		
PROPOSED ARCH BRIDGE LA PLATA-BAKERS SPRINGS ROAD AT JENKINS MILL		
LOCATION PLAN		
Scale Various	February 4, 1929	Contract 064
Drawn by LWC	Checked by LWC	Engineered by [Signature]
Chief Engineer		
File No. 5017	Packet No. 2	Folder No. 22

CH-496





74-496

STATE OF MARYLAND  
STATE ROADS COMMISSION  
BALTIMORE MD.

PROPOSED ARCH BRIDGE  
LA PLATA LANSING SPRINGS ROAD AT JENKINS HILL

DETAIL PLAN

Sec. 25, Varicus February 5, 1925

Approved  
[Signature]  
[Signature]  
[Signature]

74-496

File No. 74-496, Pocket No. 74-496, Folder No. 23







CH-496

BRIDGE # 8024, MD 225 OVER MATTANOMAN CREEK

CHARLES CO., MD

ROBERT SHELLEY

10-99

MD SHPO

VIEW EAST ENVIRONMENTAL

1/14



CH- 496

BRIDGE # 8024, MD 225 OVER MATTAWOMAN CREEK

CHARLES CO., MD

ROBERT SHELLEY

10-99

MD SHPO

EAST APPROACH

2/14



CH- 496

BRIDGE # 8024, MD 225 OVER MATTAWOMAN CREEK

CHARLES CO., MD

ROBERT SHELLEY

10-99

MD SHPO

VIEW WEST ENVIRONMENTAL

3/14



CH-496

BRIDGE # 8024, MD 225 OVER MATTAWOMAN CREEK

CHARLES CO., MD

ROBERT SHELLEY

10-99

MD SHPO

WEST APPROACH

4/14





CH-496

BRIDGE # 8024, MD 225 OVER MATTAWOMAN CREEK

CHARLES CO., MD

ROBERT SHELLEY

10-99

MD SHPO

SOUTH WEST PARAPET

5/14



CH-496

BRIDGE #8024, MD 225 OVER MATTAWOMAN CREEK

CHARLES CO., MD

ROBERT SHELLEY

10-99

MD SHPO

VIEW SOUTH EAST

6/14



CH- 496

BRIDGE # 8024, MD 225 OVER MATTAWOMAN CREEK  
CHARLES CO., MD

ROBERT SHELLEY

10-99

MD SHPO

SOUTH ELEVATION

7/14



CH-496

BRIDGE #8624, MD 225 OVER MATTAWOMAN CREEK

CHARLES CO., MD

ROBERT SHELLEY

10-99

MD SHPO

DETAIL, SE SECTION OF SOUTH ELEVATION  
8/14





CH-496

BRIDGE #8024, MD 225 OVER MATTAWOMAN CREEK

CHARLES CO., MD

ROBERT SHELLEY

10-99

MD SHPO

DETAIL, SW SECTION OF SOUTH ELEVATION

9/14



CH-496

BRIDGE # 8024, MD 225 OVER MATTAWOMAN CREEK

CHARLES CO., MD

ROBERT SHELLEY

10-99

MD SHPO

VIEW SOUTHWEST

10/14



CH-496

BRIDGE # 8024, MD 225 OVER MATTAWOMAN CREEK

CHARLES CO., MD

ROBERT SHELLEY

10-99

MD SHPO

SOUTHEAST ABUTMENT AND WINGWALL

11 / 14



CH-496

BRIDGE# 8024, MD 225 OVER MATTAWOMAN CREEK

CHARLES CO., MD

ROBERT SHELLEY

10-99

MD SHPO

NORTH ELEVATION FROM CREEK

12/14





CH- 496

BRIDGE # 8024, MD 225 OVER MATTAWOMAN CREEK

CHARLES CO., MD

ROBERT SHELLEY

10-99

MD SHPO

DETAIL, EAST SECTION OF NORTH ELEVATION

13/14



CH-496

BRIDGE #8024, MD 225 OVER MATTA WOMAN CREEK

CHARLES CO., MD

ROBERT SHELLEY

10-99

MD SHPO

NORTH ELEVATION FROM ROAD

14/14

**INDIVIDUAL PROPERTY/DISTRICT  
MARYLAND HISTORICAL TRUST  
INTERNAL NR-ELIGIBILITY REVIEW FORM**

Property/District Name: SHA Bridge #8024, MD 225 over Mattawoman Creek Survey Number: CH-496  
~~CH-382~~

Project: MD 225 bridge widening Agency: SHA

Site visit by MHT Staff: X no \_\_\_ yes Name \_\_\_\_\_ Date \_\_\_\_\_

Eligibility recommended X Eligibility not recommended \_\_\_\_\_

Criteria: \_\_\_A \_\_\_B XC \_\_\_D Considerations: \_\_\_A \_\_\_B \_\_\_C \_\_\_D \_\_\_E \_\_\_F \_\_\_G  
\_\_\_None

Justification for decision: (Use continuation sheet if necessary and attach map)

SHA Bridge No. 8024, MD 225 over Mattawoman Creek, Charles County is a concrete arch bridge, single span, of reinforced concrete with 3 open and 2 closed panel parapets. The parapets are attached to the crown of the bridge by a lock and key method.

Concrete arch bridges are generally considered to be individually eligible for the National Register as reinforced concrete arch bridges demonstrate the capability of reinforced concrete. This bridge is also an excellent example of the arched version of the standard plan used in a rural setting by the State Roads Commission in 1928 and 1929. Therefore it qualifies for the National Register of Historic Places under Criterion C. In this the Trust is concurring with the Interagency Historic Bridge Committee in its earlier determination of eligibility.

Documentation on the property/district is presented in: Project Review and Compliance Files

Prepared by: Rita Suffness, SHA

Anne E. Bruder May 28, 1998  
Reviewer, Office of Preservation Services Date

NR program concurrence: X yes \_\_\_ no \_\_\_ not applicable

Peter Kent 5/28/98  
Reviewer, NR program Date

*Handwritten initials*

## MARYLAND COMPREHENSIVE HISTORIC PRESERVATION PLAN DATA - HISTORIC CONTEXT

### I. Geographic Region:

- |   |  |
|---|--|
| <input type="checkbox"/> Eastern Shore            | (all Eastern Shore counties, and Cecil)                                      |
| <input checked="" type="checkbox"/> Western Shore | (Anne Arundel, Calvert, Charles, Prince George's and St. Mary's)             |
| <input type="checkbox"/> Piedmont                 | (Baltimore City, Baltimore, Carroll, Frederick, Harford, Howard, Montgomery) |
| <input type="checkbox"/> Western Maryland         | (Allegany, Garrett and Washington)   |

### II. Chronological/Developmental Periods:

- |   |                     |
|---|---------------------|
| <input type="checkbox"/> Paleo-Indian   | 10000-7500 B.C.     |
| <input type="checkbox"/> Early Archaic  | 7500-6000 B.C.      |
| <input type="checkbox"/> Middle Archaic   | 6000-4000 B.C.      |
| <input type="checkbox"/> Late Archaic   | 4000-2000 B.C.      |
| <input type="checkbox"/> Early Woodland   | 2000-500 B.C.       |
| <input type="checkbox"/> Middle Woodland  | 500 B.C. - A.D. 900 |
| <input type="checkbox"/> Late Woodland/Archaic  | A.D. 900-1600       |
| <input type="checkbox"/> Contact and Settlement   | A.D. 1570-1750      |
| <input type="checkbox"/> Rural Agrarian Intensification   | A.D. 1680-1815      |
| <input type="checkbox"/> Agricultural-Industrial Transition   | A.D. 1815-1870      |
| <input checked="" type="checkbox"/> Industrial/Urban Dominance  | A.D. 1870-1930      |
| <input type="checkbox"/> Modern Period  | A.D. 1930-Present   |
| <input type="checkbox"/> Unknown Period ( <input type="checkbox"/> prehistoric <input type="checkbox"/> historic) |                     |

### III. Prehistoric Period Themes:

- ☐ Subsistence
- ☐ Settlement
- ☐ Political
- ☐ Demographic
- ☐ Religion
- ☐ Technology
- ☐ Environmental Adaptation

### IV. Historic Period Themes:

- ☐ Agriculture
- ☒ Architecture, Landscape Architecture, and Community Planning
- ☐ Economic (Commercial and Industrial)
- ☐ Government/Law
- ☐ Military
- ☐ Religion
- ☐ Social/Educational/Cultural
- ☒ Transportation

### V. Resource Type:

Category: Structure  
 Historic Environment: Rural  
 Historic Function(s) and Use(s): Stream crossing/transportation  
 Known Design Source: Maryland State Road Commission, Standard Plan

MARYLAND INVENTORY OF HISTORIC BRIDGES  
HISTORIC BRIDGE INVENTORY  
MARYLAND STATE HIGHWAY ADMINISTRATION/  
MARYLAND HISTORICAL TRUST

MHT No. CH-496

SHA Bridge No. 8024

Bridge name MD 225 over Branch of Mattawoman Creek

**LOCATION:**

Street/Road name and number MD 225 (Hawthorne Road)

City/town Mason Springs Vicinity X

County Charles

This bridge projects over: Road ☐ Railway ☐ Water ☒ Land ☐

Ownership: State ☒ County ☐ Municipal ☐ Other ☐

**HISTORIC STATUS:**

Is bridge located within a designated historic district? Yes ☐ No ☒  
National Register-listed district ☐ National Register-determined-eligible district ☐  
Locally-designated district ☐ Other ☐  
Name of district \_\_\_\_\_

**BRIDGE TYPE:**

Timber Bridge ☐ :  
Beam Bridge ☐ Truss -Covered ☐ Trestle ☐ Timber-And-Concrete ☐

Stone Arch Bridge ☐

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Metal Arch ☐

Metal Cantilever ☐

Concrete ☒ :  
Concrete Arch ☒ Concrete Slab ☐ Concrete Beam ☐ Rigid Frame ☐

Other ☐ Type Name \_\_\_\_\_

**DESCRIPTION:****Describe Setting:**

Bridge 8024 carries MD 225 over a branch of the Mattawoman Creek. MD 225 runs in a north-south direction and crosses a Branch of Mattawoman Creek Run that flows east-west. MD 225 connects southern Charles County with the county seat at LaPlata. The area surrounding the bridge is lightly developed with post-World War II housing. The viewshed of the bridge is woods and marshland.

**Describe Superstructure and Substructure:**

Bridge 8024 is a single span filled spandrel concrete arch bridge built in 1929. The overall length of the bridge is 57 feet with a clear span at the springline of 35 feet. There is clear roadway width of 24 feet, with an overall width of 27 feet 2 inches. The northern wingwalls are approximately 11 feet long and 10 feet high with a width of 27 feet. The top of the crown is separated from the riding surface by the bridge's earthen fill. The spandrel walls vary in width from 1 foot 10 inches at the top of the crown to 6 feet at the joint of the wingwall. The spandrel walls have a 2-inch cove molding on the intrados and a 1-inch angle strip on the extrados.

Based on field visits and a 1995 inspection report, the arch has areas of longitudinal cracking with moderate to heavy efflorescence along the construction joints at the outer edges of the intrados. In addition, there are areas of fine random cracking and light scale along the remaining portions of the intrados. The riding surface has random area of sealed longitudinal and transverse cracking.

The 1995 inspection report noted the condition of the abutments and wingwalls. The abutments have heavy erosion along the faces of the east and west abutments, with some surface spalling. The outer edges of both the east and west abutments show heavy efflorescence. There is spalling present along both the northwest and northeast wingwall. The wingwalls also have fine random cracking along the remaining surface, with heavy areas of heavy vegetation growth. The bridge is rated as being in satisfactory condition, with a sufficiency rating of 66.

The bridge has its original parapets. They are a combination of the open panel and the closed panel design. On either side of the clear span, the wingwalls have 11-foot closed paneled parapets. These parapets have a 2 foot by 8 foot incised panel as decoration. The sections of the parapets are attached to the crown of the bridge by a lock and key method. The 2-inch by 4-inch key rests in a 2 inch by 4-inch lock at the top of the crown. The clear span has 3 sets of open paneled parapets. Each section has 11 balusters to 1 paneled expansion joint. The 11 balusters within each section total 9 feet 2 inches in length. Each baluster is 2 feet 8 inches high with a 1 foot 4 inch cap extending the length of the parapet. Each open section is divided by a 2 foot 6 inch expansion joint. The open sections are separated from the closed section by 1/4-inch felt expansion joint. The five sections (closed, open, open, open, closed) total 57 feet 6 inches in length.

The spandrel walls currently have areas of gunite repairs made at an unknown date along the south spandrel wall, however, there are also areas of light efflorescence and fine cracking at these points. The northern walls have light scale with area of fine vertical cracking along the surface areas.

The parapets have areas of medium to heavy scale along both the northern and southern balusters, with random spalling along the posts. The top sections of the endblocks were repaired at an unknown date. There is some misalignment, but not enough to cause replacement concern.

**Discuss Major Alterations:**

No major alterations have occurred to this structure.

**HISTORY:**

**WHEN** was bridge built (actual date or date range) 1929

This date is: Actual X Estimated     

Source of date: Plaque      Design plans      County bridge files/inspection form X

Other (specify)

**WHY was bridge built?** To replace an earlier concrete structure

**WHO was the designer?** State Roads Commission

**WHO was the builder?** State Roads Commission

**WHY was bridge altered?** N/A

**Was bridge built as part of an organized bridge-building campaign?**

No, this bridge was not built as part of an organized bridge building campaign.

### **SURVEYOR/HISTORIAN ANALYSIS:**

**This bridge may have National Register significance for its association with:**

**A - Events** \_\_\_\_ **B- Person** \_\_\_\_

**C- Engineering/architectural character** X \_\_\_\_

The bridge was determined eligible by the Interagency Review Committee in February 1996.

**Was bridge constructed in response to significant events in Maryland or local history?**

Bridge 8024 was built on the LaPlata-Masons Springs Road (Hawthorne Road) at Jenkins Hill. This road connected the eastern farmers of Charles County to the county seat at LaPlata in central Charles County. In 1928 when designs began for the current structure, Hawthorne Road was a moderately improved trading route with a gravel road. The State Roads Commission redesigned the road and removed the existing single land concrete bridge. Before the new arch was built, a temporary timber bridge was built to the south of the existing concrete arch bridge. The construction engineers were instructed to remove the demolished reinforced concrete bridge and use the rubble as pavement, fill, and rip rap in the stream bed. The temporary bridge was dismantled and piled along side the new bridge to await relocation.

The new bridge was built using funds from the "Special Bridge Fund." This fund allowed the state to issue bonds for the construction of new bridges where needed. The proceeds of the bond issue were credited to the accounts of the State roads Commission, with 80% going directly to Commission-sponsored projects and 20% going to the City of Baltimore. This bridge was built to improve a connector road between the county seat and the surrounding county. This project was begun in 1908 as part of the Commission's initial "Seven-Year Plan," and continued until the 1940s.

**When the bridge was built and/or given a major alteration, did it have a significant impact on the growth & development of the area?**

The pre-existing bridge at the upstream location was a concrete bridge that was probably built during the first decade of the twentieth century to replace a timber bridge. The realignment of the road eliminated a dangerous alignment along this route, however, it did not increase the progression of development in this area. Charles County remained relatively rural and agrarian until the late-twentieth century. The building of this bridge assisted the local communities, but did not have a great impact on the economy.

**Is the bridge located in an area that may be eligible for historic designation?**

No, this bridge is not located in an area that is eligible for historic designation.

**Is the bridge a significant example of its type?**

Yes, this bridge is a significant example of a single-span concrete arch bridge built during the 1910 to 1940 key period of significance. During this period reinforced concrete structures were characterized by increasing standardization of small slab, beam, frame, and culvert spans. Special subtypes of reinforced concrete bridges, such as the Luten arch, open spandrel ribbed arch, the rigid frame bridge and concrete girders were introduced and built as grade crossing elimination structures.

The as-built plans for bridge 8024 stated the bridge should be built to State Roads Commission Specifications, dated February 5, 1929. It is important to note that the State Roads Commission during this time did not have specific plans for the every standard arch. However, the engineers did have design specifications for the concrete, the reinforcement



bars, the parapets, and the expansion joints. It was the responsibility of the engineer to determine the load and traffic conditions along with the environmental confines and design a standard arch bridge.

**Does bridge retain integrity of important elements described in Context Addendum?**

Yes this bridge retains integrity of its character defining elements. Although some repairs were made to the wingwalls, the barrel, the spandrel walls, the parapets, and the abutments, all are original and have only moderate deterioration.

**Is the bridge a significant example of the work of the manufacturer, designer, and/or engineer and why?**

Yes, this bridge is a significant example of the State Roads Commission's efforts from 1910 until 1945 to eliminate dangerous geometric alignments. The development of standardized plans helped to facilitate this process.

**Should bridge be given further study before significance analysis is made?**

No, this bridge should not be given further study.

**BIBLIOGRAPHY:**

County inspection/bridge files \_\_\_\_\_ SHA inspection/bridge files   X    
Other (list):

Johnson, Arthur Newhall

1899 The Present Condition of Maryland Highways. In *Report on the Highways of Maryland*. Maryland Geological Survey, The Johns Hopkins University Press, Baltimore.

P.A.C. Spero & Company and Louis Berger & Associates

1995 Historic Highway Bridges in Maryland: 1631-1960: Historic Context Report. Maryland State Highway Administration, Maryland State Department of Transportation, Baltimore, Maryland.

Tyrrell, H. Grattan

1909 *Concrete Bridges and Culverts for Both Railroads and Highways*. The Myron C. Clark Publishing Company, Chicago and New York.

**SURVEYOR:**

Date bridge recorded December 1997

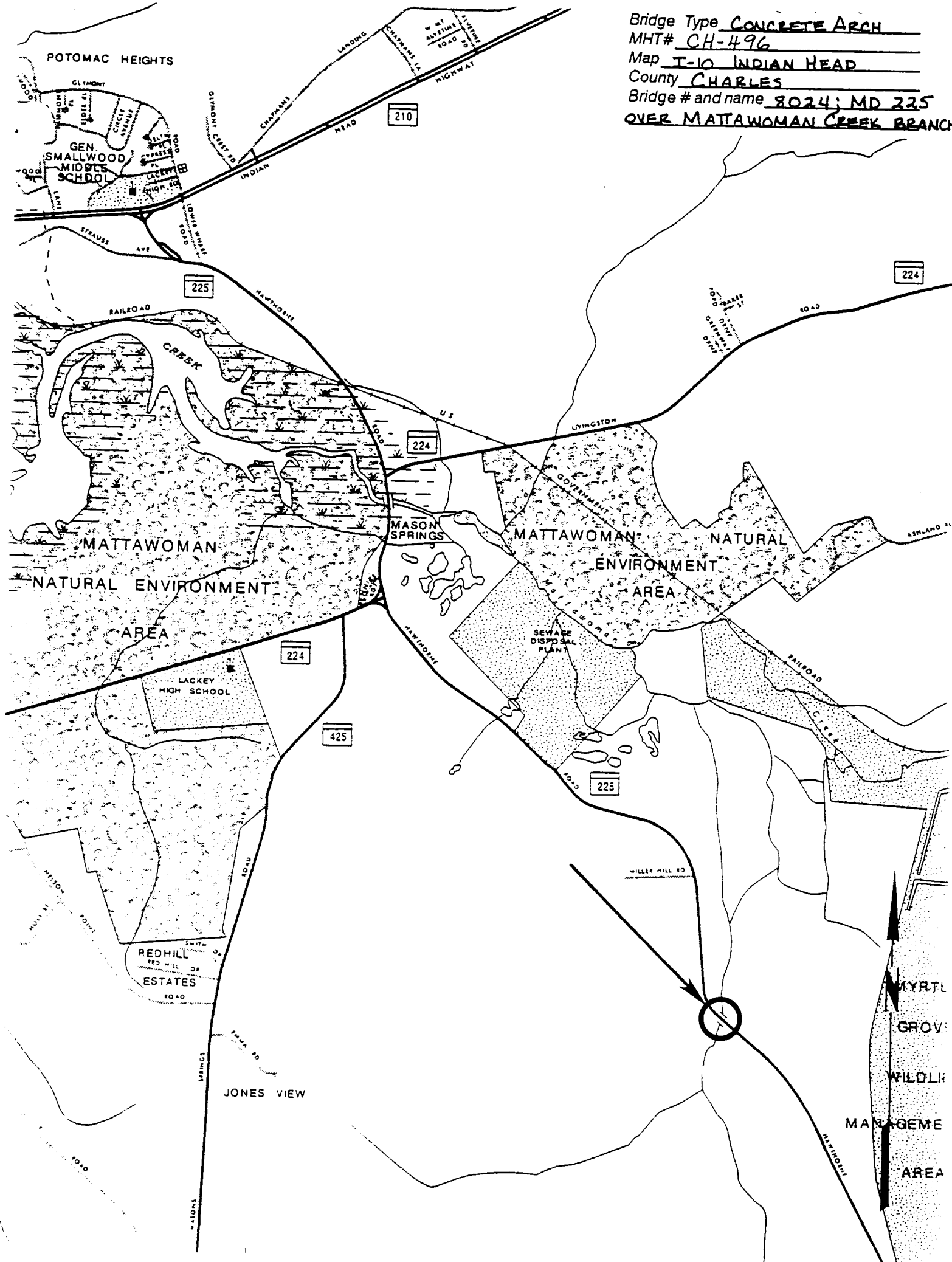
Name of surveyor Wallace, Montgomery & Associates / P.A.C. Spero & Company

Organization/Address P.A.C. Spero & Co., 40 W. Chesapeake Avenue, Baltimore, MD 21204

Phone number (410) 296-1635

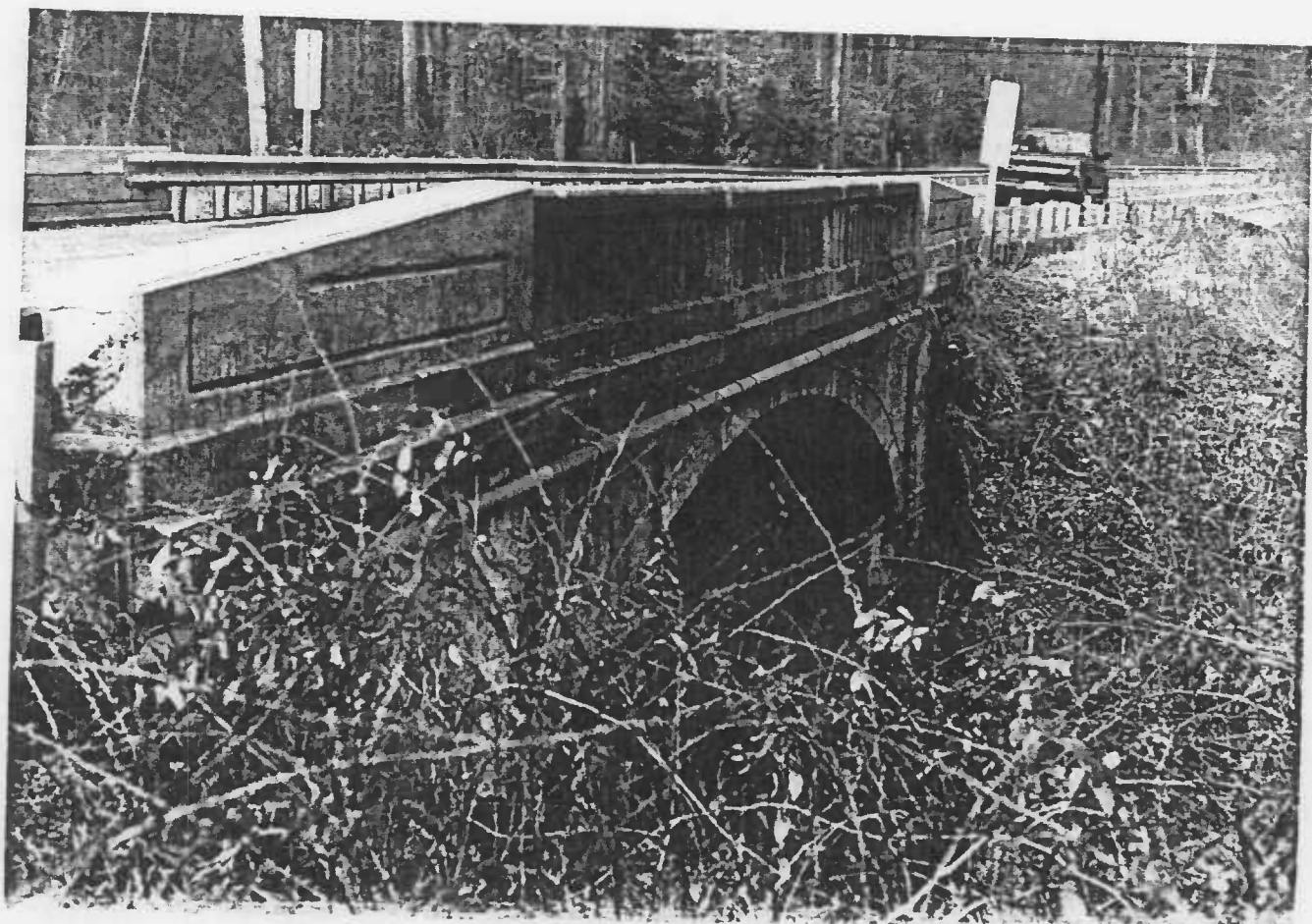
FAX number (410) 296-1670

Bridge Type CONCRETE ARCH  
MHT# CH-496  
Map T-10 INDIAN HEAD  
County CHARLES  
Bridge # and name 8024; MD 225  
OVER MATTAWOMAN CREEK BRANCH



PROLINE # 14913  
KLEER-VU 5x7

CH-496



PROLINE # 14913  
KLEER-VU 5x7





CH-496



CH-496





CH-496  
BRIDGE 8024

BRIDGE NORTH FACE (LOOKING SOUTH)



CH-496  
BRIDGE 5024

BRIDGE NORTH FACE (LOOKING SOUTH)